

**MULTIPLE-SOURCE ARRAYS WITH OPTICAL TRANSMISSION
ENHANCED BY RESONANT CAVITIES**

Abstract of the Invention

A multiple source array for illuminating an object including: a reflective mask
5 having an array of spatially separated apertures; at least one optic positioned relative to
the mask to form an optical cavity with the mask; and
a source providing electromagnetic radiation to the optical cavity to resonantly excite a
mode supported by the optical cavity, wherein during operation a portion of the
electromagnetic radiation built-up in the cavity leaks through the mask apertures towards
10 the object.